

**Amendments to the Claims:**

*This listing of claims will replace all prior versions, and listings, of claims in the application:*

1. (Currently Amended) A substrate transfer apparatus for a component mounting machine, for transferring a substrate into a mounting process {8} in which components are mounted onto the substrate and transferring the substrate from said mounting process {8}, comprising:

a mounting-waiting process {7} for making the substrate to be transferred into the mounting process {8} wait before the mounting process {8}; and

a substrate discharge-waiting process {9} for making the substrate after being transferred from the mounting process {8} wait before a following process, wherein

transfer of an unmounted substrate {3} from said mounting-waiting process {7} to the mounting process {8} and transfer of a mounted substrate {2} for which mounting has been done in the mounting process {8} from the mounting process {8} to the substrate discharge-waiting process {9} are performed simultaneously,

characterized in that detecting means {6} are provided for detecting that a plurality of substrates have been transferred into the substrate discharge-waiting process {9} as part of the same transfer.

2. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 1, wherein the detecting

means includes: a substrate-arrival detecting sensor (5e) for detecting the mounted substrate (2) transferred into the substrate discharge-waiting process (9); and a substrate-continuity detecting sensor (6), provided upstream of the substrate-arrival detecting sensor (5e), for detecting an unmounted substrate (3) being transferred at the same time as the mounted substrate (2).

3. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 2, wherein the substrate-continuity detecting sensor (6) is arranged at a position that satisfies  $X < XS < 2X$ , where a distance from the substrate-arrival detecting sensor (5e) to the substrate-continuity detecting sensor (6) is  $XS$  and a substrate dimension in the substrate transfer direction is  $X$ .

4. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 3, wherein the substrate-continuity detecting sensor (6) is arranged to be movable to the position that satisfies  $X < XS < 2X$ .

5. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 3, wherein the substrate-continuity detecting sensor (6) is constructed to be automatically movable to the position that satisfies  $X < XS < 2X$ , in accordance with the substrate dimension  $X$  in the substrate transfer direction.

6. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 1, wherein the detecting

means includes: a substrate-arrival detecting sensor (5e) for detecting the mounted substrate (2) transferred into the substrate discharge-waiting process (9); and a plurality of substrate-continuity detecting sensors (6a, 6b, 6c), provided upstream of the substrate-arrival detecting sensor (5e) at different positions in a substrate transfer direction from one another, for detecting an unmounted substrate (3) being transferred at the same time as the mounted substrate (2).

7. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 6, wherein the substrate-continuity detecting sensors (6a, 6b, 6c) detect an unmounted substrate (3) by a substrate-detection state of one (6b) of the plurality of substrate-continuity detecting sensors (6a, 6b, 6c) that is located at a position satisfying  $X < XS < 2X$ , where a distance from the substrate-arrival detecting sensor (5e) to the one substrate-continuity detecting sensor (6b) is  $XS$  and a substrate dimension in the substrate transfer direction is  $X$ .

8. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 6, wherein the substrate transfer apparatus includes a minimum required number of the substrate-continuity detecting sensors (6a, 6b, 6c) by arranging  $N$  sensors that satisfy  $2^N \times P_{\min} > P_{\max}$  at positions determined by  $2^n \times P_{\min} 2$  ( $n = 1, 2, \dots, N$ ) from a minimum substrate size ( $P_{\min}$ ) and a maximum substrate size ( $P_{\max}$ ) in the substrate transfer direction, respectively, for which the electronic component mounting machine (1) is intended.

9. (Currently Amended) The substrate transfer apparatus for a component mounting machine according to claim 7, wherein the substrate transfer apparatus includes a minimum required number of the substrate-continuity detecting sensors ~~(6a, 6b, 6c)~~ by arranging N sensors that satisfy  $2^N \times P_{\min} > P_{\max}$  at positions determined by  $2^n \times P_{\min}$  ( $n = 1, 2, \dots, N$ ) from a minimum substrate size ( $P_{\min}$ ) and a maximum substrate size ( $P_{\max}$ ) in the substrate transfer direction, respectively, for which the electronic component mounting machine (1) is intended.